

530,991  
Rec'd PCT/APO 12 APR 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
29 April 2004 (29.04.2004)

PCT

(10) International Publication Number  
WO 2004/035222 A2

(51) International Patent Classification<sup>7</sup>:

B05B

(74) Agents: BAYS, Gregory, C. et al.; Leydig, Voit & Mayer, LTD., Suite 4900, Two Prudential Plaza, 180 North Stetson, Chicago, IL 60601-6780 (US).

(21) International Application Number:

PCT/US2003/032462

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 14 October 2003 (14.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/418,902 15 October 2002 (15.10.2002) US

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

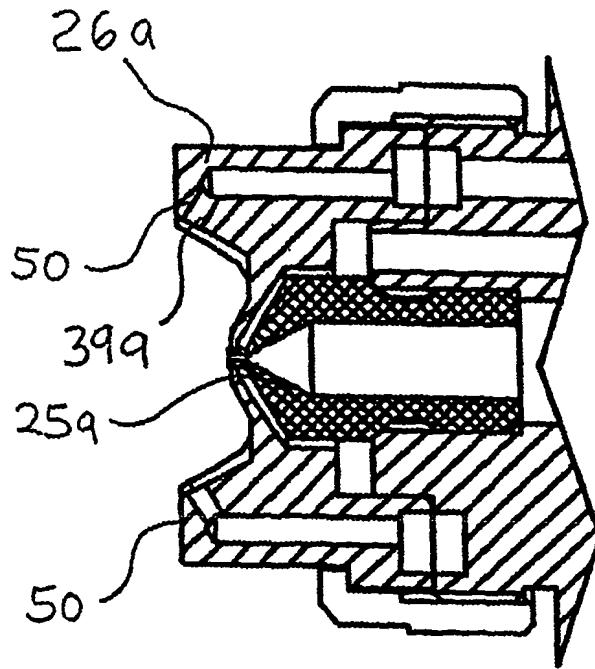
(71) Applicant (*for all designated States except US*): SPRAYING SYSTEMS, CO. [US/US]; North Avenue at Schmale Road, P.O. Box 7900, Wheaton, IL 60189-7900 (US).

Published:

— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: EXTERNAL MIX AIR ASSISTED SPRAY NOZZLE ASSEMBLY



(57) Abstract: A spray device comprising a body having a liquid discharge passage and a spray nozzle assembly affixed to the body is provided. The spray nozzle assembly includes a liquid spray tip for directing liquid from the liquid passage in the body into a predetermined spray pattern and an atomizing fluid cap. The liquid spray tip includes a forwardly extending nose portion that defines a liquid discharge orifice. The nose extends through a central opening in the air cap thereby defining an annular atomizing fluid discharge orifice that communicates with an atomizing fluid inlet. The nose extends in a downstream direction past the central opening in the air cap such that the liquid discharge orifice is arranged at least approximately 2mm. downstream of the annular atomizing fluid discharge orifice.

WO 2004/035222 A2

WO 2004/035222 A2



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*